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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2003-SW-06-AD; Amendment 39-13064; AD 2003-04-15]

RIN 2120-AA64

Airworthiness Directives; Sikorsky Aircraft Corporation Model S-76A, B, and C Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) for the specified Sikorsky Aircraft Corporation (Sikorsky) model helicopters. This action requires determining the manufacturer of a certain part-numbered rotor brake disc (RBD) and if the manufacturer is Parker Hannifin Corporation (PHC), re-identifying the RBD as appropriate. This action also requires before the first flight of the next day following any day in which a certain RBD was used, visually inspecting the RBD for a crack. If a crack is found, this AD also requires replacing the RBD with an airworthy RBD or deactivating it as applicable depending on the nature of the crack. This amendment is prompted by the discovery that certain RBDs manufactured by PHC were improperly heat treated resulting in "soft" RBDs that have an increased wear rate compared to those heat treated in accordance with the type design requirement. Further investigation reveals that "soft" RBDs develop cracks more frequently than previously manufactured RBDs. The actions specified in this AD are intended to prevent failure of the RBD, damage to the rotor blades and nearby hydraulic and fuel lines, and subsequent loss of control of the helicopter.

DATES: Effective February 27, 2003.

Comments for inclusion in the Rules Docket must be received on or before April 28, 2003.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Office of the Regional Counsel, Southwest Region, Attention: Rules Docket No. 2003-SW-06-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. You may also send comments electronically to the Rules Docket at the following address: 9-asw-adcomments@faa.gov.

FOR FURTHER INFORMATION CONTACT: Terry Fahr, Aviation Safety Engineer, Boston Aircraft Certification Office, 12 New England Executive Park, Burlington, MA 01803, telephone (781) 238-7155, fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: This amendment adopts a new AD for the specified Sikorsky model helicopters. This amendment is prompted by the discovery that a certain part-numbered RBD manufactured by PHC was improperly heat treated resulting in "soft" RBDs that have an increased wear rate compared to those heat treated in accordance with the type design requirement. Further investigation reveals that "soft" RBDs develop cracks more frequently than previously manufactured RBDs. The actions specified in this AD are intended to prevent failure of the RBD, damage to the rotor blades and nearby hydraulic and fuel lines, and subsequent loss of control of the helicopter.

The FAA has reviewed Sikorsky Alert Service Bulletin (ASB) Nos. 76-66-36, dated November 12, 2002, and 76-66-37, dated January 31, 2003. ASB No. 76-66-36 describes a one-time visual inspection of the RBD to determine the manufacturer and to reidentify the RBD if necessary. ASB No. 76-66-36 also specifies an initial and recurring inspection for certain reidentified RBDs. ASB No. 76-66-37 specifies removing certain RBDs from service and provides interim instructions for operating the helicopter until a replacement RBD is installed.

This unsafe condition is likely to exist or develop on other helicopters of these same type designs. Therefore, this AD is being issued to prevent failure of the RBD, damage to the rotor blades and nearby hydraulic and fuel lines, and subsequent loss of control of the helicopter. This AD requires the following:

- Before further flight, determine the manufacturer of each RBD by examining the part number (P/N) markings. This AD requires no further action if the manufacturer is BF Goodrich or Goodyear.
- If the RBD is manufactured by PHC, reidentify it with a P/N 76363-09103-104 or -105, as applicable, depending on the serial number of the RBD. If you cannot determine the PHC RBD serial number or the manufacturer, reidentify the RBD with P/N 76363-09103-104.
- Before the first flight of the next day following any day in which the RBD was used, visually inspect each RBD, P/N 76363-09103-104, for a crack.
- If you find a crack through the entire RBD thickness or two or more surface cracks between adjacent boltholes, replace the RBD with an airworthy RBD before further flight. If you find a surface crack or surface cracks separated by the boltholes, replace the RBD with an airworthy RBD or deactivate it before further flight.
- Replace PHC RBD, P/N 76363-09103-104, with an airworthy RBD on or before May 31, 2003, or within 60 days after the effective date of this AD, whichever occurs later.
- Replacement RBD, P/N 76363-09103-104, is not airworthy.

The short compliance time involved is required because the previously described critical unsafe condition can adversely affect the controllability of the helicopter. Therefore determining the manufacturer, reidentifying the RBD as specified, inspecting the RBD for a crack, and either replacing the RBD or deactivating it is required before further flight and this AD must be issued immediately.

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

The FAA estimates that 165 helicopters will be affected by this AD, that it will take approximately 2 work hours to determine the manufacturer of the RBD, 1 hour to reidentify the RBD, 2 hours to inspect the RBD, and 6 hours to replace the RBD. The average labor rate is \$60 per work hour. Required parts will cost approximately \$1,250 per helicopter. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$315,150 per helicopter, assuming all RBDs were manufactured by PHC, are with the affected S/N range, must be remarked, do not have sufficient cracking to warrant immediate replacement, and the rotor brake is not used until the day prior to the day that all RBDs are replaced.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 2003-SW-06-AD." The postcard will be date stamped and returned to the commenter.

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2003-04-15 Sikorsky Aircraft Corporation: Amendment 39-13064. Docket No. 2003-SW-06-AD.

Applicability: Model S-76A, B, and C helicopters, certificated in any category.

Note 1: This AD applies to each helicopter identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For helicopters that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent failure of the rotor brake disc (RBD), damage to the rotor blades and nearby hydraulic and fuel lines, and subsequent loss of control of the helicopter, accomplish the following:

(a) Before further flight, determine the manufacturer of each RBD by examining the part number (P/N) markings, and perform the required actions as follows:

(1) If the P/N is 76363-09101-102, the manufacturer is Goodyear. No further action is required by this AD.

(2) If the P/N 76363-09103-102 is pressure stamped on the RBD, the manufacturer is BF Goodrich. No further action is required by this AD.

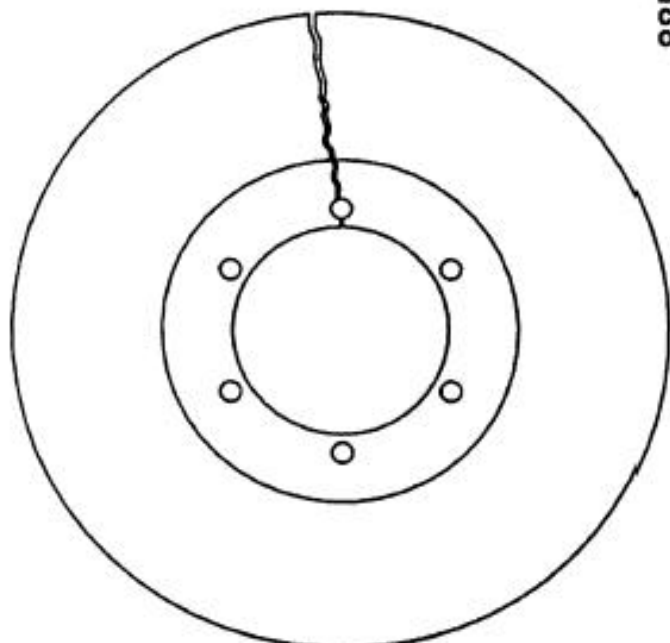
(3) If the P/N 76363-09103-102 is electrolytically etched on the RBD, the manufacturer is Parker Hannifin Corporation (PHC). For each PHC RBD with a P/N 76363-09103-102 and serial number (S/N) other than 38 through 379, remark the P/N as P/N 76363-09103-105 using the vibropeen method. No further action is required by this AD.

(4) If the RBD serial number or the manufacturer cannot be determined and for PHC RBDs with P/N 76363-09103-102 and S/N's 38 through 379, reidentify or mark the P/N as 76363-09103-104 or replace the RBD in accordance with paragraph (c) of this AD.

Note 2: Sikorsky Aircraft Corporation Alert Service Bulletin (ASB) Nos. 76-66-36, dated November 12, 2002, and ASB 76-66-37, dated January 31, 2003, pertain to the subject of this AD.

(b) Before the first flight of the next day following any day in which the RBD was used, visually inspect each RBD, P/N 76363-09103-104, for a crack, and perform the following actions. See Figure 1.

**CRACK THROUGH WALL
REPLACE DISC PRIOR TO NEXT FLIGHT**

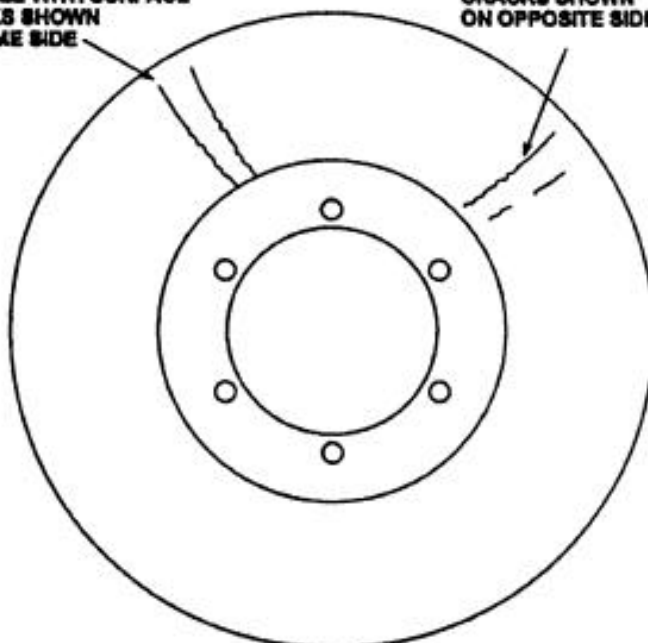


VIEW A

**MULTIPLE CRACKS BETWEEN 2 ADJACENT BOLT HOLES
REPLACE DISC PRIOR TO NEXT FLIGHT**

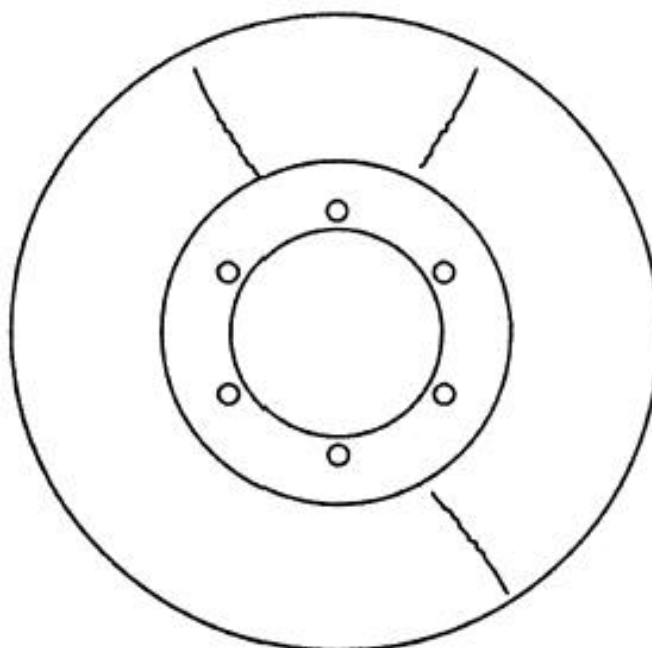
**EXAMPLE WITH SURFACE
CRACKS SHOWN
ON SAME SIDE**

**EXAMPLE WITH SURFACE
CRACKS SHOWN
ON OPPOSITE SIDE**



VIEW B

**Multiple Surface Cracks Separated by Boltholes
Replace Disc or Deactivate Brake Prior to Next Flight**



VIEW C

**RBD INSPECTION LIMITS
FIGURE 1.**

(1) If you find a crack through the entire RBD thickness as shown in Figure 1, View A, replace the RBD with an airworthy RBD, other than P/N 76363-09103-104, before further flight.

(2) If you find two or more surface cracks between adjacent boltholes as shown in Figure 1, View B, replace the RBD with an airworthy RBD, other than P/N 76363-09103-104, before further flight.

(3) If you find a surface crack or surface cracks separated by the boltholes as shown in Figure 1, View C, replace the RBD with an airworthy RBD, other than P/N 76363-09103-104, or deactivate the RBD before further flight.

Note 3: Short "glazing" cracks are not a cause for rejection.

Note 4: PHC Component Maintenance Manual with Illustrated Parts List PH030-21300MM, Rotor Brake Assembly, P/N 030-21300, Revision C, dated November 1, 2002, pertains to the subject of this AD.

(c) Replace PHC RBD, P/N 76363-09103-104, with an airworthy RBD on or before May 31, 2003, or within 60 days after the effective date of this AD, whichever occurs later. Any replacement RBD, P/N 76363-09103-104, is not airworthy.

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Boston Aircraft Certification Office, FAA. Operators shall submit their requests through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, Boston Aircraft Certification Office.

Note 5: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Boston Aircraft Certification Office.

(e) Special flight permits will not be issued.

(f) This amendment becomes effective on February 27, 2003.

Issued in Fort Worth, Texas, on February 14, 2003.

David A. Downey,
Manager, Rotorcraft Directorate, Aircraft Certification Service.
[FR Doc. 03-4474 Filed 2-26-03; 8:45 am]
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